

LDP Extensions for Multi Topology Routing

draft-ietf-mpls-ldp-multi-topology-03.txt

Quintin Zhao, Huaimo Chen, Emily Chen, Huawei
Luyuan Fang, Chao Zhou, Kamran Raza, Cisco Systems
Lianyuan Li, Lu Huang, Cheng Li, China Mobile
Ning So, Verizon
Raveendra Torvi, Juniper
Danil King, OldDog Consulting

Updates in the draft (1)

- ❑ Thanks for the comments from Eric Rosen, Ijsbrand Wijnands, Alia Atlas, Yiqun Cai and Dimitri Papadimitriou.
- ❑ New author Daniel King has joined this work.
- ❑ The main updates in the drafts:
 1. The MT IP Address family is defined and it is used in the existing prefix FEC element.
 2. LDP MT capability advertisement TLV is updated to include the MT Typed Wildcard FEC element.
 3. New status codes are added;
 4. The application scenario section is moved into the appendix section.

Updates in the draft (2)

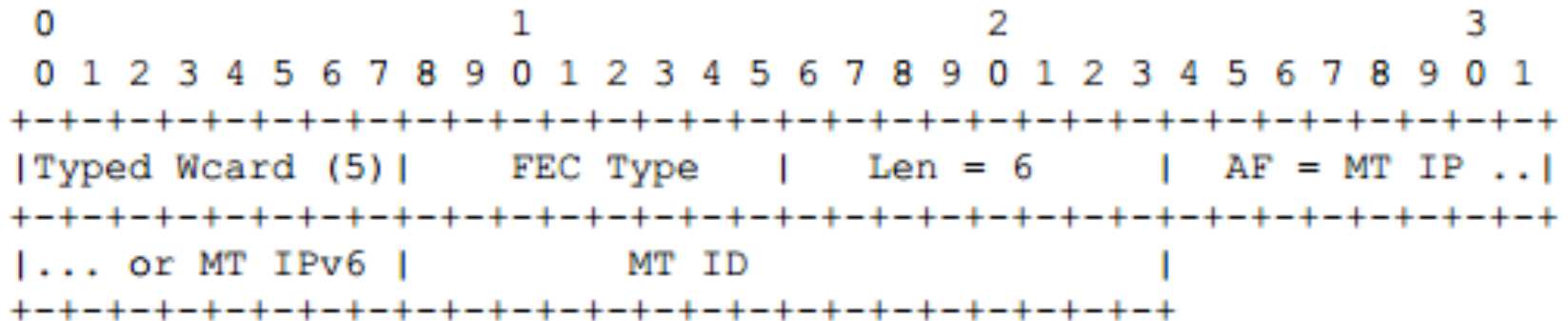
- ❑ MPLS Multiple Topology ID representation : define new address families to represent the prefixes associated to a specific topology.

For MT LDP, the "Prefix" FEC element's "Address Family" will be set to "MT IP" or "MT IPv6", and the FEC element will be encoded as follows:

[illegible]

Updates in the draft (3)

- The MT Typed Wildcard FEC element encoding is as follows



Updates in the draft (4)

- ❑ The "MT" capability is specified using "Multi-Topology Capability" TLV. The format of "Multi-Topology Capability" TLV is as follows

[illegible]

Updates in the draft (5)

❑ IANA Considerations: The document introduces following new protocol elements that require IANA consideration and assignments:

❑ New LDP Capability TLV: "Multi-Topology Capability" TLV (requested code point: 0x510 from LDP registry "TLV Type Name Space").

❑ New Status Code:

Registry:

Range/Value	E	Description
-----	---	-----
0x00000050	1	Multi-Topology Capability not supported
0x00000051	1	Invalid Topology ID
0x00000052	0	Unknown Address Family

Updates in the draft (6)

❑ IANA Considerations: The document introduces following new protocol elements that require IANA consideration and assignments:

- New address families under IANA registry "Address Family Numbers"
 - MT IP: Multi-Topology IP version 4 (requested codepoint: 26)
 - MT IPv6: Multi-Topology IP version 6 (requested codepoint: 27)
- New registry "LDP Multi-Topology (MT) ID Name Space" under "LDP Parameter" namespace. The registry is defined as:

Range/Value	Name
-----	-----
0	Default Topology (ISIS and OSPF)
1-4095	Unassigned
4096	ISIS IPv6 routing topology (i.e. ISIS MT ID #2)
4097-65534	Reserved (for future allocation)
65535	Wildcard Topology (ISIS or OSPF)

Next Steps

- ❑ The authors request WG experts to review and comment on this new version of the LDP-MT solution.
- ❑ Working group last call?

Questions & Comments?

Thanks!